

FILED

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA

2014 OCT -6 P 1:11

Erik B. Cherdak
600 Cameron Street
Alexandria, VA. 22314

Plaintiff, Pro Se,

v.

Polar Electro, Inc. USA
111 Marcus Avenue, Ste. M15
Lake Success, NY 11042

Defendant.

CLERK US DISTRICT COURT
ALEXANDRIA, VIRGINIA

Case No. 1:14-CV-1318

(AJT/mj)

COMPLAINT
FOR PATENT INFRINGEMENT

JURY TRIAL DEMANDED

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Erik B. Cherdak (hereinafter "Plaintiff" or "Cherdak"), *Pro Se*, and in and for his Amended Complaint against the above-named Defendant, asserts the following:

NATURE OF THE ACTION

1. This action is hereby commenced in the U.S. District Court for the Eastern District of Virginia against Defendant Polar Electro, Inc. USA ("Polar") for past patent infringement under the U.S. Patent Act (35 USC § 1, *et seq.*) in connection with Polar's past unlawful manufacture, importation, sale and use of products that infringed U.S. Patent Nos. 5,343,445 and 5,452,269 both to Cherdak (the "patents-in-suit"). Prior to expiration of the patents-in-suit, Polar enjoyed phenomenal and profitable success in relation sales of its activity monitoring products (e.g., wrist worn activity watches/monitors) adapted for use with Polar's foot pod sensor devices (e.g., the Polar S1 Food Pod device also known as an "SDM" or speed and distance monitoring device, the

Polar s3+ Foot Pod device, and the Polar Bluetooth Foot Pod device -- all of which were introduced, manufactured and sold prior to expiration of the patents-in-suit). Because Plaintiff's licensees marked their licensed products with both of the patents-in-suit, Polar had at least constructive notice relative to its infringing conduct that remains actionable and compensable under the U.S. Patent Act. Others, including Polar's direct competitor, namely Garmin International, Inc., is a licensed party under the patents-in-suit in relation to devices previously accused of infringement in the case styled *Cherdak v. Garmin, et al.*, Case No. 1:13-cv-777 (LO/jfa) (2013).

THE PARTIES

2. Plaintiff is an individual having his principal place of business at the address first stated in the caption of this Complaint. At all times relevant herein, Plaintiff has been and is the named inventor in and owner of U.S. Patent Nos. 5,343,445 and 5,452,269 (hereinafter referred to as the "patents-in-suit") and all reexamination certificates related thereto.

3. Defendant Polar Electro, Inc., USA is a Delaware Corporation having a principal place of business located at the address first stated in the caption of this Complaint. Service of process may be made on Defendant Polar ("Polar") through its registered agent United States Corporation Company, 2711 Centerville Road, STE 400, Wilmington, DE 19808.

JURISDICTION AND VENUE

4. This is an action for Patent Infringement of U.S. Patent Nos. 5,343,445 and 5,452,269 (per reexamination on two (2) separate occasions) to Cherdak under the Laws of the United States of America and, in particular, under Title 35 of the United States Code (Patents – 35 USC § 1, *et seq.*). Accordingly, Jurisdiction and Venue are properly based in accordance with Sections 1338(a), 1391(b) and (c), and/or 1400(b) of Title 28 of the United States Code.

5. Defendant has in the past engaged in the design, importation, distribution, sale, and offering for sale of products including, but not limited to, those which incorporate technologies and the use of methods covered and claimed by the patents-in-suit. At all times relevant herein, Defendants had engaged in the infringement of and/or induced the infringement of and/or contributed to the infringement of the patents-in-suit patent throughout the United States, including, but not limited to, in this judicial district of Virginia, USA.

FACTS

6. On July 6, 1993, Plaintiff filed a patent application entitled “Athletic Shoe with Timing Device” which resulted in the issuance of the U.S. Patent 5,343,445 on August 30, 1994. On August 29, 1994, Plaintiff filed a Continuation-type application also entitled “Athletic Shoe with Timing Device” which resulted in the issuance of the U.S. Patent No. 5,452,269 on September 19, 1995. The patents-in-suit cover and claim products like those used, made, imported, offered for sale, marketed, and sold by Defendant directly and indirectly under The U.S. Patent Act. The patents-in-suit have successfully gone through the USPTO’s expert review on three occasions: First, in the early 1990’s during initial examination proceedings; Second, during *ex parte* reexamination proceedings in the 2007-2008 time-frame; and Third, during *ex parte* reexamination proceedings in 2012. Such reexamination proceedings resulted, *inter alia*, in the confirmation of many claims without amendment and the addition of new claims then-submitted to better define the claimed inventions of the ‘445 and ‘269 patents. The patents-in-suit along with their reexamination certificates are attached hereto at **Exhibits 1 through 6**. Plaintiff owns all right, title and interest and to the patents-in-suit and, as such, has the full right to bring this action for past patent infringement and to seek all available remedies for acts of past patent infringement.

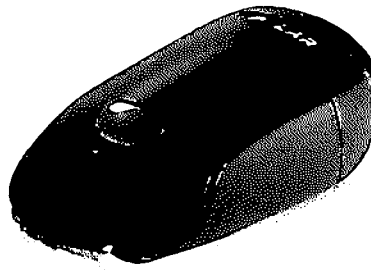
7. Defendant manufactured, marketed and sold wrist-worn activity monitors and related Foot Pod Sensor products for sensing activity metrics related to foot action during activities such as during running, jumping, walking and stepping – all contemplated by the patents-in-suit.

8. **EXEMPLARY** infringing products manufactured, marketed, sold and distributed by Defendant throughout the United States and in this particular judicial district of Virginia, USA, included the POLAR® RS300Xsd boxed set that included a POLAR® heart rate sensor strap (shown behind wrist watch/monitor) for wearing around a person's chest), a POLAR® RS300 wrist watch/monitor (middle object), and a POLAR® S1 Foot Pod device (front object).



This Complaint and this action are NOT limited to the EXEMPLARY products shown and identified above. Due discovery in this case will reveal the true scope of accused products that are subject to Plaintiff's claims of infringement as specified herein. Accordingly, any reader of this Complaint should NOT assume that the foregoing listing of products is in any way exhaustive.

9. Defendant has long enjoyed a reputation of producing high quality products that utilize low-power communications protocols in various activity tracking devices (e.g., wrist-worn watches that double as activity monitors) that are interoperable with foot pod sensor products sold as "SDM" (Speed and Distance Monitors). Such wrist-worn devices act as activity metric manifestation devices giving users real-time or real-time-like data about their performance during activities like running, jumping, etc. Such foot pod sensor devices also referred to as "SDM" (for "Speed and Distance Monitor") manufactured and marketed by Defendant include the following POLAR® branded products:



The POLAR® Foot Pod Sensor Product (SDM S1)
(Adapted with Clip for Mounting to a Shoe at its laces)



The POLAR® STRIDE SENSOR BLUETOOTH® SMART
(Adapted for installation on a person's shoe)



The POLAR® s3+ Stride Sensor
(Adapted for installation on a person's shoe)

10. Defendant Polar advertised that its SDM S1 Foot Pod by stating the following: "The Polar S1 foot pod should be just as much a part of your training as your running shoes. Accurately measuring your running speed/pace and distance, this essential piece of kit will be with you every step of the way. And even though it attaches to your shoe laces, it's so light that you'll forget it's even there, which means it won't affect your running performance."

See Exhibit 7.

11. Defendant Polar provides a user's guide (Exhibit 8) with the S1 product that instructs users as follows:

Attach Foot Pod on Shoe

To measure speed/pace and distance accurately, make sure the foot pod is correctly positioned.

1. Undo the flap and detach the foot pod from the fork (see picture 3).



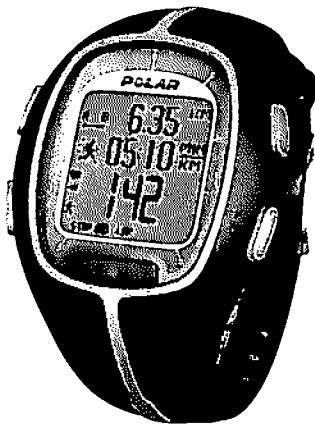
2. Loosen your shoelaces and place the fork underneath them, on top of the tongue of the shoe (see picture 4). Tighten the laces.
3. Fit the front part of the foot pod (closest to the red button) to the fork and press from the rear (see picture 5). Fasten the flap. Make sure the foot pod does not move and is aligned with your foot. The more secure the sensor, the more accurately speed and distance are measured.
4. Turn the foot pod on before exercising. Press and hold the red button on the foot pod until the green light starts flashing (see picture 6).
5. After exercising, turn the foot pod off by pressing and holding the red button until the green light switches off.

12. Defendant Polar advertised that its STRIDE SENSOR BLUE TOOTH device by stating: The Stride Sensor Bluetooth® Smart is for runners who want to improve their technique and performance. It allows you to see speed and distance information with the Polar Beat app, whether you are running on a treadmill or on the muddiest trail...Measures each stride you take to show running speed and distance... See **Exhibit 9**. According to the USER MANUAL for the BLUETOOTH foot pod stride sensor, POLAR® asserts that “Using sensitive inertial sensors, it gives accurate and highly responsive speed, distance, leg cadence and stride length measurements.” See **Exhibit 10** at page 1.

13. Defendant Polar advertised its s3/s3+ Stride Sensor device by stating: “The s3+ stride sensor comes with a new, firm shoe attachment which guarantees accurate speed and distance measurement. This small and lightweight sensor measures each stride you take, helping you to analyze the effectiveness and efficiency of your run.” See **Exhibit 11**. According to the USER MANUAL for the s3/s3+ foot pod stride sensor, POLAR® asserts that “Using sensitive inertial sensors to track the position of the foot it gives accurate and highly responsive speed, distance, leg cadence and stride length measurements.” See **Exhibit 12** at page 1.

14. Defendant Polar has manufactured, marketed, and sold numerous monitoring devices that are compatible and operate in conjunction with the foot pod devices discussed herein. *See Exhibit 13.*

15. The famous website/blog (www.dcrainmaker.com) has done several reviews of POLAR® products wrist worn watches/monitors that operate in conjunction with POLAR® branded foot pod devices including the foot pod devices mentioned herein. *See Exhibit 14.* Clear from the dcrainmaker blog is the fact that POLAR® branded foot pod devices include accelerometer based sensor devices to sense movements relative to human gait or what is commonly referred to as “stride” in order to determine steps, step or jump speed (distance over time), pace, etc. *Id.* Defendant Polar has long made wrist worn monitors capable of communicating with foot pod sensor devices and manifesting content related to a person’s activity performance. Some, but not all, additional POLAR® branded activity monitors sold by Defendant Polar prior to expiration of the patents-in-suit include the following devices:



POLAR® RS 200
Training Computer



POLAR® RS 400
Training Computer



POLAR® RC3 GPS
Training Computer

16. Defendants’ foot pod sensor and related products (e.g., wrist-worn data monitoring and manifestation devices) have been imported, marketed, offered for sale, and sold by Defendants to

operate based on sensing when a shoe leaves and returns to the ground – exactly how this Court has previously advised as to how the ‘445 patent operates. *See Exhibit 15* at page 6 (this Honorable Court holding “The 445 patent senses when a shoe leaves and returns to the ground.”).

17. Prior to the natural expiration of the patents-in-suit, other manufacturers and marketers of similar and licensed products were obligated under contract to include patent markings related to the patents-in-suit in connection with their sales of licensed foot pod sensor products and products that included the same. For example, and not by way of limitation, Pear Sports, LLC marked the products within its PEAR ONE™ product line with the patents-in-suit as follows: “Products may be covered by one or more of the following patents until their expiration: USP 5,343,445 and USP 5,452,269. Products sold under license.” Other parties also marked their product offerings including with legends that read “Covered by one or more of U.S. Patent Nos. 5,343,445 and 5,452,269.” *See* http://www.bioness.com/L300_for_Foot_Drop.php.

COUNT I – PATENT INFRINGEMENT


18. Paragraphs 1 through 17 are hereby incorporated by reference as though completely set forth herein.

19. Given the validity and enforceability of the patents-in-suit against past acts of patent infringement prohibited under the U.S. Patent Act (35 USC § 1, *et seq.*), Plaintiff, *inter alia*, possesses the right to pursue a claim against Defendant for its past use, manufacture, importation, sale, offer for sale, and distribution of infringing products under 35 USC § 271(a) (direct infringement), (b) (induced infringement), and (c) (contributory infringement). Defendant infringed, contributed to the infringement of, and/or induced the infringement of the patents-in-suit in violation of 35 USC § 271(a), (b), and/or (c) by its design, use, manufacture, importation,

distribution, sale, and offer for sale of products sold under the POLAR® house mark. Such infringing products included some type of foot-based sensor device (e.g., the S1 foot pod sensor device, etc.) that was to be used in combination with some type of manifestation device coupled to said foot-based sensor device. Defendants refer to the foot-based sensor devices as “foot pods” and the manifestation device as a monitors or activity monitors or “training computers.” The foot pod was intended to be worn on or in a person’s shoe, while the manifestation device is typically worn on the person’s wrist.


20. Defendants’ foot pod sensor alone and/or in combination with certain POLAR® branded wrist-worn receivers and activity monitors and manifestation devices infringed both of the patents-in-suit. The following preliminary claim charts have been prepared during Plaintiff’s pre-filing investigation and are meant to be preliminary in nature. Discovery in this case will permit more detailed analysis and possible refinement of such exemplary and preliminary infringement charts. The following infringement charts demonstrate exemplary infringement in relation to *at least*, the following exemplary asserted claims:

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Claim 10 of U.S. Patent No. 5,343,445 C1	Exemplary Infringement Situation POLAR BRANDED PRODUCTS (e.g., the POLAR RS300Xsd Retail Product Pack)
<p>10. A method for measuring and indicating hang time off the ground and in the air during a jump by a person wearing an athletic shoe, said method comprising the steps of:</p>	<p>POLAR® RS300Xsd Retail Product Pack:</p>  <p>According to Polar: "The Polar S1 foot pod should be just as much a part of your training as your running shoes. Accurately measuring your running speed/pace and distance, this essential piece of kit will be with you every step of the way. And even though it attaches to your shoe laces, it's so light that you'll forget it's even there, which means it won't affect your running performance." See Exhibit 7. Speed in a conventional context is scalar value computed as distance covered over time ($s = d/t$). Thus, the foot pod measures the passage of time between certain aspects of a person's step or stride.</p>
<p>(a) measuring in the shoe elapsed time between the shoe leaving the ground and returning to the ground;</p>	<p>This claimed method step literally reads on the Accused Products. Elapsed time is measured between the shoe leaving the ground and returning to the ground. Such measuring occurs within the foot pod sensor device as part of sensing stride parameters based on timing operations.</p>
<p>(b) from the elapsed time measured in step (a), determining in said shoe whether said person has jumped off the ground or taken a walking or running step; and</p>	<p>This claimed method step literally reads on the Accused Products. Circuitry within the foot pod sensor determines whether a person has jumped off the ground, taken a walking step or a running step.</p>

<p>(c) upon determining in step (b) that the person has jumped off the ground, providing an indication at said shoe, perceptible to said person, of the elapsed time measured in step (a).</p>	<p>This claimed method step literally reads on the Accused Products. Upon determining in step (b) the person has jumped off the ground (e.g., during a running sequence involving a series of jumps, etc.), the Accused products will provide an indication at (in, on or near) the shoe of the elapsed time measured in step (a). The infringing combination of Accused Products utilize close-proximity radio frequency technologies that call for the foot pod sensor device and the wrist worn visual display device to be near each other to realize effective communications. The foot pod sensor will determine many activity-based metrics over time (e.g., pace, speed and other time-based data). The wrist-worn component of the infringing combination provides a visual indication that is perceptible (visible) to the person.</p>
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Claim 12 of U.S. Patent No. 5,452,269 C1	Exemplary Infringement Situation POLAR BRANDED PRODUCTS (e.g., the POLAR RS300Xsd Retail Product Pack)
<p>12. The method of measuring hang time off the ground and in the air of an individual, said method comprising the steps of:</p>	<p>POLAR® RS300Xsd Retail Product Pack:</p>  <p>According to Polar: "The Polar S1 foot pod should be just as much a part of your training as your running shoes. Accurately measuring your running speed/pace and distance, this essential piece of kit will be with you every step of the way. And even though it attaches to your shoe laces, it's so light that you'll forget it's even there, which means it won't affect your running performance." See Exhibit 7. Speed in a conventional context is scalar value computed as distance covered over time ($s = d/t$). Thus, the foot pod measures the passage of time between certain aspects of a person's step or stride.</p>
<p>(a) providing in an athletic shoe a selectively actuable timing device;</p>	<p>This claimed method step literally reads on the Accused Products. Defendants instruct that the Foot Pod Sensor is placed on or in the athletic shoe such as attached within a shoe's laces or in a pocket formed in a sole member of the shoe.</p>
<p>(b) actuating said timing device to measure elapsed time in response to said athletic shoe leaving the ground and elevating into the air;</p>	<p>This claimed method step literally reads on the Accused Products. Timing circuitry/processes within the Foot Pod Sensor is actuated to measure elapsed time in response to an athletic shoe leaving the ground and elevating into the air.</p>
<p>(c) deactuating said timing device in response to said athletic shoe returning to the ground; and</p>	<p>This claimed method step literally reads on the Accused Products. Timing circuitry/processes within the Foot Pod Sensor is deactuated upon the athletic shoe returning the ground.</p>

(d) providing an indication at said athletic shoe representing the time interval between actuation of said timing device in step (b) and deactuation of said timing device in step (c).


The Accused Products provide an indication (e.g., pace, etc.) at (in, on or near) the athletic shoe. The indication is a visible indication and represents the time interval between actuation and deactuation of timing device circuitry within the Foot Pod Sensor.

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Claim 25 of U.S. Patent No. 5,343,445 C2	Exemplary Infringement Situation POLAR BRANDED PRODUCTS (e.g., the POLAR RS300Xsd Retail Product Pack)
<p>25. A method for indicating time off the ground and in the air during an activity including a jump, a walking step, a running step, or a skating lift by a person wearing an athletic shoe suitable to said activity, said method comprising the steps of:</p>	<p>POLAR® RS300Xsd Retail Product Pack:</p>  <p>According to Polar: "The Polar S1 foot pod should be just as much a part of your training as your running shoes. Accurately measuring your running speed/pace and distance, this essential piece of kit will be with you every step of the way. And even though it attaches to your shoe laces, it's so light that you'll forget it's even there, which means it won't affect your running performance." See Exhibit 7. Speed in a conventional context is scalar value computed as distance covered over time ($s = d/t$). Thus, the foot pod measures the passage of time between certain aspects of a person's step or stride.</p>
<p>(a) sensing, within said shoe, pressure imparted to said shoe when said leaves the ground during said activity;</p>	<p>This claimed method step literally reads on the Accused Products. As noted above, Defendant instructs consumers that the Foot Pod Sensor is to be placed on or in the athletic shoe such as in a pocket formed in a sole member of the shoe or within the laces of the shoe. The Foot Pod Sensor senses the existence of pressure (force over area) imparted to the shoe when the shoe leaves the ground (e.g., at a toe-off point in time) during an activity such as during a walking or running step, for example.</p>
<p>(b) sensing, within said shoe, pressure imparted to said shoe when said shoe returns to the ground at the end of said activity; and</p>	<p>This claimed method step literally reads on the Accused Products. The Foot Pod Sensor senses the existence of pressure (force over area) imparted to the shoe when the shoe returns to the ground (e.g., at a heel strike) during an activity such as during a walking or running step, for example.</p>

<p>(c) activating, within said shoe, a messaging device in relation to the time interval between said shoe leaving and returning to the ground as sensed in steps (a) and (b), respectively, said messaging device providing an indication related to said time interval in a manner perceptible to said person.</p>	<p>This claimed method step literally reads on the Accused Products. Timing circuitry/processes within the Foot Pod Sensor activates (e.g., send data, signals, commands for operation, etc.) a messaging device that may be located at the shoe or otherwise such as on the wrist of a person. The messaging device is the watch unit and is configured to provide an indication related to the time interval occurring between when the shoe leaves and later returns to the ground.</p>
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Claim 28 of U.S. Patent No. 5,343,445 C2	Exemplary Infringement Situation POLAR BRANDED PRODUCTS (e.g., the POLAR RS300Xsd Retail Product Pack)
28. The method according to claim 25, wherein said messaging device activated during said activating step (c) is worn on said person and remotely from said shoe.	<p>POLAR® RS300Xsd Retail Product Pack:</p>  <p>The messaging device is located within a watch device to be worn on the wrist of its user and is activated during the activating step (c) of Claim 25. In radio-communication with the Foot Pod Sensor, the messaging device is located remotely from the shoe.</p>

21. Discovery in this case will likely reveal additional instances of infringement such as may be related to additional products and claims of the patents-in-suit.

22. Defendants products infringed the patents-in-suit both directly and indirectly under 35 USC §§ 271(a), (b) and (c) literally and/or under the Doctrine of Equivalents. Given the sole and intended purpose of Defendant's foot pod sensor products to measure and determine time-based foot-action metrics during activities in which a person's foot leaves and returns to the ground, Defendant's products were specifically designed to operate in non-staple infringing ways. And, on information and belief, Defendant has infringed the patents-in-suit in violation of 35 USC § 271(b) by actively inducing distributors, customers, and/or other retailers to infringe the patents-in-suit through marketing and technical documentation means.

23. On information and belief, Defendants have made (and/or have had made on their behalf) infringing products and have marketed the same throughout the U.S. and, in particular, in this judicial district of Virginia, USA.

24. Because of Defendant's past infringing activities in the marketplace, Plaintiff has been injured. Thus, the U.S. Patent Act mandates that Plaintiff be granted remedies including, damages for past infringement in an amount of no less than a reasonable royalty. The Court is informed that there licensing terms that call for such reasonable royalties on a per-unit basis in relation to sales of foot pod Sensor products and related messaging devices that may be coupled thereto.

25. Because of the subjectively willful nature of Defendant's past infringing activities in violation of 35 USC § 271 (a), (b) and (c), Plaintiff is entitled to enhanced damages of no less than trebled damages as permitted by the U.S. Patent Act (35 USC § 1, *et. seq.*), along with attorneys fees and costs of suit. In particular, Polar has acted despite an objectively high likelihood that its actions constitute infringement of the valid, enforceable patents-in-suit, and (2) Polar has so acted despite an objectively high risk of infringement that was known or was so obvious that it should have been known Polar in the marketplace in which it competes.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Cherdak prays for judgment and relief Defendant Polar as follows:

1. For a judgment that the Cherdak patents-in-suit were infringed by Defendants (including, but not limited to, their subsidiaries, predecessors-in-interest and business units however and wherever formed, etc.) each standing alone as described herein as

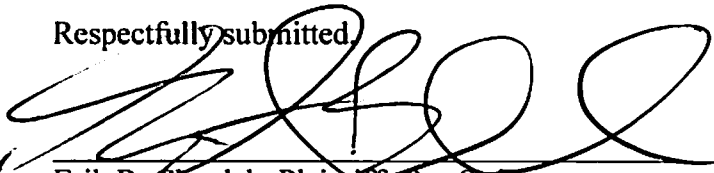
they have independently acted to bring to market and encourage the infringing use of products within their respective product lines;

2. That an accounting be had for damages to Plaintiff by Defendant's acts in violation of the U.S. Patent Act (35 USC § 1, *et seq.*) together with pre-judgment and post-judgment interest and costs of suit;
3. That damages be assessed at no less than a reasonable royalty in regard to acts of patent infringement by Defendant Polar as complained of herein;
4. That any damages awarded in accordance with any prayer for relief be enhanced and, in particular, trebled in accordance with the U.S. Patent Act (35 USC § 1, *et seq.*) for Defendant's acts which are found to be willful acts of patent infringement; and
5. Such other and further relief as this Court shall deem just and proper.

DEMAND FOR TRIAL BY JURY

The Plaintiff hereby demands a TRIAL BY JURY on all issues so triable.

Respectfully submitted,

10/3/2014 

Erik B. Cherdak, Plaintiff *Pro Se*
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(202) 330-1994
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Exhibits List:

- 1 U.S. Patent No. 5,343,445
- 2 Reexamination Certificate for U.S. Patent 5,343,445 C1
- 3 Reexamination Certificate for U.S. Patent 5,343,445 C2
- 4 U.S. Patent No. 5,452,269
- 5 Reexamination Certificate for U.S. Patent 5,452,269 C1
- 6 Reexamination Certificate for U.S. Patent 5,452,269 C2
- 7 Website printout relating to POLAR® S1 Foot Pod Device
- 8 User Manual relating to POLAR® S1 Foot Pod Device
- 9 Website printout relating to POLAR® s3/s3+ Foot Pod Device
- 10 User Manual relating to POLAR® s3/s3+ Foot Pod Device
- 11 Website printout relating to POLAR® Bluetooth Foot Pod Device
- 12 User Manual relating to POLAR® Bluetooth Foot Pod Device
- 13 Listing of Foot Pod Compatible Devices Sold by Defendant Polar
- 14 Blog printout from dcraimaker.com
- 15 Memorandum Opinion in Case No. 1:11-cv-1311 LO/jfa dated 4/23/2012